

PROVISIONAL APPLICATION FOR PATENT

INVENTION TITLE

Spring-Loaded Travel Mug Lid to Keep Beverages Hotter Longer

DESCRIPTION

[Para 1] The present invention relates to a travel coffee mug lid that closes to keep the contents of the mug twice as hot as traditional coffee mug lids.

[Para 2] The present invention is comprised of (1) a grooved plastic slide to move in a preformed channel, (2) ball bearings, (3) a 20 lb spring, and (4) a round lid for a travel mug with grooved channel for the slide.

[Para 3] The most necessary of the elements is the 20 lb spring. It is possible that other springs could be swapped out to get a similar result. However, the 20 lb spring ensures a seal that closes tighter.

[Para 4] When released, the 20 lb spring pulls the slide through the pre-formed grooves in the lid to seal the opening of the travel mug completely. Due to the pressure created by the 20 lb spring, the slide forms a complete seal even when liquid is present.

[Para 5] The invention is made by combining a polymer slide into a grooved polymer lid and attaching a 20 lb spring to a small hole in the slide to the lid. The ideal assembly calls for the slide to have less than .01mm clearance on either side in the groove of the lid.

[Para 6] The invention could be used in various styles of travel mugs. It also, on a larger scale, could be used to close other vessels wherein temperature regulation is important such as a beer brewer.

[Para 7] To use the invention, a person would simply place a finger on the slide and move it through the groove until the mug's hole is exposed. When they remove pressure from the slide it automatically closes resealing the lid.

WHAT IS CLAIMED IS:

[Claim 1] A travel mug lid that keeps the contents of a mug 29% hotter than that of a traditional lid through use of a spring-loaded precision-grooved sliding lid.

ABSTRACT

[Para 8] Traditional travel mug lids use a flap that flips up and leaves a hole to the liquid exposed unless it is manually closed by the user. This results in excessive heat loss to the hot beverage in the mug. By incorporating a spring-loaded slide design beverages are kept about 29% hotter for a longer period of time with the mug automatically resealing itself after every use.